

RC 180

ELASTIC HYDRAULIC 2-COMPONENT MORTAR FOR PERFORMING WATERPROOFING WORKS AND PROTECTION OF STRUCTURES

Waterproofing | Concrete repair



ADVANTAGES OF RC 180

- ✓ Fast and effective curing on different types of surfaces
- ✓ Anti-carbonation protection
- ✓ Low environmental impact
- ✓ Good resistance to UV radiation and freeze/thaw cycles
- ✓ Elastic up to -5°C

Description

RC 180 is an elastic hydraulic two-component mortar for performing waterproofing work and protection of existing works. It forms an elastic impenetrable film, even under negative pressure of 8 bar.

Area of application

- Waterproofing system for reservoirs, receptacles, balconies, loggias, terraces (with the exception of roof terraces) and glued systems under tiles or mortar floors;
- Casing of elevator shafts, parking garages and buried spaces;
- Waterproofing for glued systems under tiles in swimming pools or damp rooms.

Properties

- Fast curing which allows short application times between the first and second layer and the application of tiles, even in the presence of low temperatures (within 48 hours);
- Effective curing on solid surfaces, even partially wet;
- Reduced risks when applied with rain, fog and others;
- Suitable for contact with drinking water;
- Anti-carbonation protection with "barrier" function;
- Good resistance to UV-radiation and frost/thaw cycles;
- Elastic up to -5°C;
- Adheres to different types of surfaces (concrete, masonry, brick, plasterboard, plastic, metal, ceramic, polystyrene, wood, etc.);
- Low environmental impact thanks to reduced CO₂-emissions, very low volatile organic matter emissions (VOC) and components obtained from recycling processes.

Substrate

Preparation

The surface must be healthy. Remove dirt, oil, paint and other material or precipitate that can possibly affect the adhesion of RC 180 with high pressure jets, sandblasting or lightly hammering. The surface to be treated must be firm and perfectly clean and free of cement milk. Repair the surface with suitable mortars from the Reynchemie range if the surfaces are very uneven, with gravel nests or in the case of mixed brickwork. If the surfaces are old or dusty, apply RC ACRYPLAST primer with a roller, a brush or with a spray (see related technical data sheet). For surfaces that are not completely dry, but where the curing process has been completed, the air humidity must not exceed 8%.

Preparation of the product

The two components must be mixed with a low speed mechanical mixing machine (300-500 rpm). Shake the can with the liquid well before pouring into the tub. To obtain a homogeneous mixture, proceed as follows: pour the resin into a sufficiently large mixing bowl, gradually add the powder during mixing until an elastic paste without lumps is obtained.

Application instructions

If the RC ACRYPLAST primer has not been applied, moisten the surfaces and ensure that no surface water is formed. RC 180 must be applied in two layers with a roller, brush, scraper or spatula. Apply the first layer of RC 180 on the surface, approximately 1 mm thick (average consumption: 1,5 to 1,7 kg/m²), making sure that the product penetrates well into the substrate to obtain uniform coverage.

If the roller/brush drags the product, do not add water but moisten the surface. The second layer, approximately 1 mm thick (average consumption: 1,5 to 1,7 kg/m²) must be applied after a minimum of 2 hours (ambient temperature +20°C, air humidity 60%). In the case of an application on a horizontal surface with a spatula, it is recommended to apply the first layer with the specific 3,5 mm toothed trowel that regulates the thickness. In that case the second layer is applied with the specific round stainless steel trowel, this smoothens the serrated surface. In any case, it is advisable to apply the second layer only when the previous layer is dry and cured. The product can also be applied with a worm pump type Jetpro 100 with an external compressor type Europro 40 that delivers 450 liters and a fully automatic pistol that seals both air and material with an opening of 4-6 mm.

Reinforcement net

To improve the elastic performance, in the case of application in positive pressure (for example, hairline cracks with dynamic behaviour, in swimming pools on the roof and structures that may be subject to cracks), it is advisable to apply a reinforcement net in the first layer. Press it down with a metal spatula until it is fully embedded. The edges of adjacent sheets must overlap each other by 10 cm.

Foundation walls

When waterproofing the foundation walls, allow RC 180 to cure for at least 16 hours after application before refilling. When coating the waterproofing with any type of protective layer or finish (ceramic coating, protective screed, plaster, cement-based leveling compound, plastic drainage, etc.), allow it to dry for at least 16 hours after application. At low temperatures up to +5°C wait almost 24 hours. When waterproofing structures intended to contain water, you must observe a curing phase of at least 3 days.

Drinking water applications

In contact with drinking water, wash the surfaces clean with running water before filling them with drinking water. The curing times can be longer in the presence of a low temperature, high air humidity or premature contact with water.

Consumption

1,5 to 2 kg/m²/layer depending on the roughness of the substrate.

Technical information

Characteristics	Values
View:	Component A: grey powder / Component B: white liquid
Lifespan (+20°C):	20'
Processing temperature (+20°C):	-5°C to +50°C
Density paste:	> 1,65 kg/l
Ratio by weight:	33/100

Specification	Test method	Performance requirements EN 1504-2	Specified performance (*)	Gecertificeerde prestaties (**)
Adhesion during degradation tests:	EN 1542	≥ 0.8 MPa	≥ 0.8 MPa	0,89 MPa
Resistance to accelerated aging:	EN 1062-11	no swelling	-	fulfilled requirement
Capillary absorption and water permeability:	EN 1062-3	≤ 0.1 kg*m ⁻² *h ^{-0.5}	≤ 0.1 kg*m ⁻² *h ^{-0.5}	≤ 0.1 kg*m ⁻² *h ^{-0.5}
Vapor permeability:	EN 7783-2	Class 1 - s _d < 5 m	Class 1 - s _d < 5 m	s _d = 3,2 m
CO ₂ permeability:	EN 1062-6	s _d > 50 m	-	s _d > 102 m
Fire reaction:	EN 13501-1		-	Euroclass F

Specification	Certifying body	Test method	Certified performance (**)
Impermeability under negative pressure (concrete structure water/concrete: 0.7)	SA (Switzerland)	EN 12390-8	8 Bar: no entry

Security

Consult the most recent Safety Data Sheet.

Remarks

- The product is not a vapor barrier.
- RC 180 must be processed within 20 minutes after mixing.
- Do not apply to surfaces soaked with water (see application).
- Do not add water to the mix, RC 180 is a ready-made product.
- Do not apply RC 180 in temperatures higher than +30°C and lower than +5°C or in expected freezing temperatures within 24 hours.
- If more than 28 days have passed since the second coating, an additional layer must be applied. Make sure that the next layer adheres well.
- Protect the wet mortar from the rain.
- Considerable condensation can occur in environments with poor ventilation or high humidity.
- The maximum layer thickness of RC 180 is 1,5 mm per layer.
- Finishes with solvent-based paint systems are degrading on RC 180.
- Check the compatibility with the substrate by means of prior tests.
- The preparation and application data relate to standard environmental conditions.

Cleaning of equipment

With water.

Storage / Shelf life

12 months after the date of manufacture in the original, unopened packaging, to protect against moisture, frost and temperatures above 40°C.

Packaging

RC 180 is a set of 20 kg: 15 kg powder + 5 kg liquid (item no. 51229).

Specifications

Specification	Test method	Certifying body	Values (g/l)
VOC value	Directive 42/2004/EC ISO 11890-2 ASTM D 6886-12	Eurofins 392-2017-00479601	< 1 g/l

Specification	Certification
Suitable for contact with drinking water	Report n° 14743/15
Tanks and water reserves waterproofing approval	SOCOTEC FRANCE S.A. Report (ETN) n° 601R0GAD6427 (31/08/2018)

The cited data is obtained in a laboratory at + 20 ° C and 60% RH.

* Performance thresholds guaranteed by Reynchemie

** Performance values certified by accredited third parties

Photos



LP 05-01-2021

Legal Notes

The information, and, in particular, the recommendations relating to the application and end-use of Reynchemie products, are given in good faith based on Reynchemie current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with Reynchemie recommendations. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any written recommendations, or from any other advice offered. The user of the product must test the product's suitability for the intended application and purpose. Reynchemie reserves the right to change the properties of its products. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local Product Data Sheet for the product concerned, copies of which will be supplied on request.